

**REMARKS**

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

By the foregoing amendment, claims 1, 8, 16, 17, 24, 27, 28, 35 and 38 have been amended. Thus, claims 1-38 are currently pending in the application and subject to examination.

**Informal Matters**

In the Office Action mailed June 6, 2007, claims 8-10, 24-26 and 35-37 were rejected under 35 U.S.C. § 112, second paragraph. Claims 8, 24 and 35 have been amended responsive to the rejection under 35 U.S.C. § 112. If any additional amendment is necessary to overcome the rejection, the Examiner is requested to contact the Applicant's undersigned representative.

**Rejection Under 35 U.S.C. § 101**

In the outstanding Office Action, claims 1-16, 17 and 28-38 were rejected under 35 U.S.C. § 101, as allegedly being directed to non-statutory subject matter. In making this rejection, the outstanding Office Action asserted that independent claims 1, 17, 28 and 38, and claims dependent thereon, are directed to non-statutory subject matter. The Applicants hereby traverse this rejection, as follows.

Section 2106 II A of the MPEP states:

the claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at \*1373-74<, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or

concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96 (1966); In re Fisher, 421 F.3d 1365, 76 USPQ2d 1225 (Fed. Cir. 2005); In re Ziegler, 992 F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)).

Section IV C 2 (2) of the MPEP states:

USPTO personnel shall review the claim to determine it produces a useful, tangible, and concrete result. In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is "useful, tangible, and concrete."

Claim 1 is directed to a power supply noise analysis model generator adapted to model power supply layers in a circuit board, and produces the useful, concrete and tangible result of generating "a power supply noise analysis model." Thus, according to Section IV C 2 (2) of the MPEP, claim 17 is directed to statutory subject matter. For at least this reason, the Applicants submit that claim 1 is directed to statutory subject matter.

Claim 17 is a method claim and recites a process of modeling power supply layers in a circuit board.

Section 101 of the United States Code states:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore... (emphasis added).

Thus, according to 35 USC § 101, claim 17 is directed to statutory subject matter. Furthermore, claim 17 produces the useful, concrete and tangible result of generating "a power supply noise analysis model." For at least these reasons, the Applicants submit that claim 17 is directed to statutory subject matter.

Each of claims 28 and 38 is directed to a program stored on a computer readable medium for making a computer perform certain steps, which has been deemed to be statutory subject matter, as noted below.

Section 2106.01 1 of the MPEP states:

...a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Moreover, each of claims 28 and 38 produces the useful, concrete and tangible result of generating “a power supply noise analysis model.” For at least these reasons, the Applicants submit that claims 28 and 38 are directed to statutory subject matter.

Although no specific reason was asserted in the outstanding Office Action for the 35 USC § 101 rejection of claim 16, the Applicants further submit that claim 16 is directed to a power supply noise analysis model generator which models a power supply layer in a circuit board, and produces the useful, concrete and tangible result of generating “a power supply noise analysis model.” For at least this reason, the Applicants submit that claim 16 is directed to statutory subject matter.

For all of the above reasons, the Applicants submit that claims 1, 16, 17, 28 and 38, as well as claims dependent therefrom, are directed to statutory subject matter, and withdrawal of the rejection thereof under 35 USC § 101 is respectfully requested.

**Rejection Under 35 U.S.C. § 103(a)**

Claims 1-7, 13-14, 16-23, 27-34 and 38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jong-Kwan Yook et al., “Computation of Switching Noise in

Printed Circuit Boards”, 1997, IEEE Transactions on Components, Packaging and Manufacturing Technology, Part A, Volume 20, Number 1, March 1997 (hereinafter, “Yook”) in view of Harada, U.S. Patent No. 6,557,154 (hereinafter, “Harada”). Claims 8-10, 24-26, 35-37 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yook as modified by Harada as applied to claims 1-7, 13-14, 16-23, 27-34 and 38 above, and further in view of Hao Shi et al., “Modeling Multilayered PCB Power-Bus Designs Using an MPIE Based Circuit Extraction Technique”, August 1998, IEEE International Symposium on Electromagnetic Compatibility, pages 647-651 (hereinafter, “Shi”). Claims 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yook as modified by Harada as applied to claims 1-7, 13-14, 16-23, 27-34 and 38 above, further in view of Papadopoulou, U.S. Patent No. 6,178,539. It is noted that claims 1, 8, 16, 17, 24, 27, 28, 35 and 38 have been amended. To the extent that the rejections remain applicable to the claims currently pending, the Applicants hereby traverse the rejections, as follows.

In the Applicants’ invention as recited in independent claims 1 and 16, a power supply pair extraction processing section extracts, as power supply pairs, all of any two different power supply layers that overlap each other in a plan view from a top side of the circuit board, the overlap being determined from CAD data or data indicative of the circuit board and a power supply noise analysis model generation processing section uses the power supply pairs extracted to generate a power supply noise analysis model.

The Applicants’ invention as recited in independent claims 17, 27, 28 and 38, as amended, includes a step of determining, via CAD data or data indicative of the circuit board, all power supply island patterns existing in two different layers, respectively, that

overlap each other in plan view from a top side of the circuit board, and a step of extracting all power supply island pairs determined to overlap each other in plan view from a top side of the circuit board as power supply island pairs.

The Applicants submit that none of Yook, Harada, Shi and Papadopoulou discloses or suggests each and every feature recited in independent claims 1, 16, 17, 27, 28 and 38, as amended.

For at least this reason, the Applicants submit that independent claims 1, 16, 17, 27, 28 and 38, as amended, are allowable over the applied art of record. As claims 1, 16, 17, 27, 28 and 38, as amended, are allowable, the Applicant submits that claims 2-15, 18-26 and 29-37, which depend from allowable claims 1, 17 and 28, respectively, are likewise allowable for at least the reasons set forth above with respect to claims 1, 17 and 28.

### **Conclusion**

For all of the above reasons, it is respectfully submitted that claims 1-38 are in condition for allowance and a Notice of Allowability is earnestly solicited.

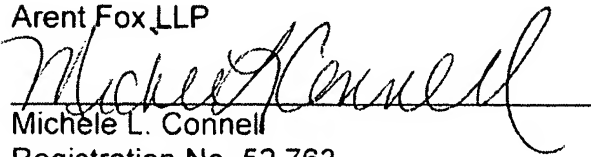
Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is invited to contact the undersigned representative at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this

communication to Deposit Account No. 01-2300 referencing client matter number  
024938-00002.

Respectfully submitted,

Arent Fox, LLP

A handwritten signature in black ink, appearing to read "Michele L. Connell", written over a horizontal line.

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Enclosures: Petition for Extension of Time